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REMARKS

Claims 1-22 are pending in the present application. In the Office Action mailed June 1, 2005, the Examiner rejected claims 1, 2, 4, 11, 14, 17, and 19 under 35 U.S.C. §103(a) as being unpatentable over Murthy et al. (USP 6,055,295) in view of Popescu (USP 6,501,828). The Examiner next rejected claims 3, 12, and 18 under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu. Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Moore (USP 4,349,917). Claims 6-8, 13, 15, 21, and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Watanabe (USP 6,325,537). Claims 9, 10, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Kalvin (USP 5,878,102). Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Hampel et al. (USP 6,173,039).

Before addressing the Office Action, Applicant would like to address the IDS filed electronically on January 17, 2005. In the Office Action, the Examiner provided initialed and signed copies of IDSs filed on February 11, 2004, and February 16, 2004. However, an initialed and signed copy of the IDS filed on January 17, 2005, was not provided with the Office Action and is not available on private PAIR. Therefore, Applicant requests that the Examiner consider, initial, and sign the IDS filed electronically on January 17, 2005.

The Examiner rejected claims 1, 2, 4, 11, 14, 17, and 19 under 35 U.S.C. §103(a) as being unpatentable over Murthy et al. (hereinafter Murthy) in view of Popescu. Applicant respectfully disagrees. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. MPEP §2142. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The references fail to teach or suggest all the claim limitations on claims 1, 2, 4, 11, 14, 17, and 19.

Murthy teaches "[a] method for automatically setting a collimator of an x-ray imaging system during image acquisition [that] includes receiving rapid scout images at an imaging station." Abstract. The method includes automatically detecting the location body regions in a rapid scout image. See col. 1, ln. 64-col. 2, ln. 1. Settings are then automatically generated for the collimator from the detected location of the body regions. See col. 2, lns. 1-3.

That is, Murthy discloses a method of automatic collimation. See Fig. 2. Murthy teaches automatically determining, classifying, and processing pixels in an image as body or non-body parts. See col. 3, ln. 59 - col. 6, ln. 50. After determining, classifying, and processing the pixels,

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a collimator setting is determined. See col. 6, lns. 51-58. This setting "is selected to cover as much of the non-body part region as is possible while leaving uncovered as much of the body part as is possible." *Id.* A subsequent step records the automatically computed collimator setting parameters. See col. 6, lns. 59-61.

Popescu teaches an apparatus and method for influencing x-rays in a beam path. Popescu teaches a collimator control that causes "the size, shape and position of the radiation window 15 of the collimator 11 always to be dynamically adapted to the region to be radiologically examined, i.e. it causes the x-ray beam 7 to be shaped so that it penetrates only the body region of the patient P containing the heart 10." Col. 5, lns. 6-13. The radiation window may be set by elements 13, 14 of the collimator and/or by elements 22, 23 of a wedge filter. See col. 5, lns. 19-22; col. 6, lns. 1-9.

Neither reference teaches or suggests all the elements of claim 1. That is, neither reference, either singly or in combination, teaches marking a user-defined region-of-interest (ROI). As stated above, Murthy teaches automatically detecting the location body regions and automatically generating settings for the collimator therefrom. Such is not tantamount to marking a user-defined ROI. Popescu fails to teach marking a user-defined ROI, and the Examiner did not identify that Popescu teaches marking a user-defined ROI. There is no teaching of marking a user-defined ROI in either Murthy or Popescu.

Furthermore, notwithstanding the teaching in Popescu of adjusting an attenuation filter, neither reference teaches or suggests automatically adjusting an attenuation characteristic of an attenuation filter based on the user-defined ROI. In fact, the Examiner states that "Murthy fails to teach or fairly suggest automatically adjusting an attenuation characteristic of an attenuation filter based on the user-defined ROI." Office Action, p. 2. Popescu teaches setting the elements of an attenuation or wedge filter "according to the prescription and is setting constant during the entire registration of x-ray images," "on the basis of radiation attenuation values measured during the course of each projection of [a] scan and allowing the determination of the size and of the position of [a] heart 10," "on the basis of [] identified radiation attenuation values," and "on the basis of a function determined before the patient measurement, namely dependent on the positions to be assumed by the x-ray source 3 during the patient measurement." See col. 7, lns. 10-54. However, Popescu also fails to teach or suggest automatically adjusting an attenuation characteristic of an attenuation filter based on the user-defined ROI. As such, neither reference teaches marking a user-defined ROI. In addition, neither reference teaches automatic adjustment of an attenuation characteristic of an attenuation filter based on a user-defined ROI.

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Therefore, the art relied upon by the Examiner fails to teach or suggest that which is being claimed. As such, Applicant believes that claim 1 and the claims that depend therefrom are patentably distinct from the art of record.

Regarding claim 11, the Examiner noted "that the structure included in claim 11 merely performs the method steps of claim 1 and is therefore obvious for the same reasons." Office Action, p. 3. Applicant respectfully disagrees.

Specifically, claim 11 calls for a computer programmed to display a user interface including an illustration of a position of the subject and allow selection of a ROI, and determine an attenuation profile of the attenuation filter based on the user-selected ROI. While the Examiner addressed the elements as set forth in claim 1, the Examiner did not indicate where the prior art teaches or suggests displaying a user interface including an illustration of a position of the subject and allow selection of a ROI. The Examiner also did not indicate where the prior art teaches or suggests determining an attenuation profile of the attenuation filter based on the user-selected ROI. As such, claim 11 is not "merely" a structure that performs the steps of claim 1.

Nevertheless, while Murthy teaches a graphical user interface which may be displayed by the automatic collimation apparatus, Murthy fails to teach or suggest displaying a user interface including an illustration of a position of the subject and allow selection of a ROI therefrom. Instead of allowing a selection of a ROI, the graphical user interface depicts leg or other peripheral study and "displays multiple station input images 40 for the full leg, the input image of a single station 42, the segmentation result for the one station 44, and results for the full leg 46." Col. 6, ln. 66 - col. 7, ln. 6. Popescu similarly fails to teach or suggest displaying a user interface including an illustration of a position of the subject and allow selection of a ROI. In addition, as stated above, Murthy teaches automatically detecting the location body regions and automatically generating settings for the collimator therefrom. In this regard, neither Murthy nor Popescu teaches allowing selection of a ROI.

Besides failing to teach or suggest displaying a user interface including an illustration of a position of the subject and allow selection of a ROI, neither Murthy nor Popescu, as previously presented, teaches or suggests determining an attenuation profile of the attenuation filter based on the user-selected ROI or determining an attenuation profile of the attenuation filter based on the user-selected ROI.

Furthermore, while the Examiner stated that "the structure included in claim 11 merely performs the method steps of claim 1," the references, nevertheless, fail to teach or suggest a table movable within the bore and configured to position a subject for tomographic data

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acquisition. Instead, Murthy teaches an imaging device "horizontally movable in the direction of arrow 30 so that x-ray images can be taken of the peripherals at a plurality of imaging stations." Col. 3, Ins. 10-12. Both Murthy and Popescu fail to teach any movable table configured to position a subject for tomographic data acquisition, and the Examiner has not indicated any teaching of a movable table configured to position a subject for tomographic data acquisition.

Therefore, for at least these reasons, the art relied upon by the Examiner fails to teach or suggest that which is being claimed. As such, Applicant believes that claim 11 and the claims that depend therefrom are patentably distinct from the art of record.

With regard to claim 17, the Examiner indicated that claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy in view of Popescu. As required by MPEP § 714.02(b), the applicant must reply to the Office Action. The reply must also "reply to every ground of objection and rejection in the prior Office action." *Id.* However, the Examiner failed to provide a ground of rejection of claim 17. While Applicant believes that claim 17 is patentable over the prior art, Applicant cannot point out disagreements with the Examiner's contentions when none are provided. See form paragraph 7.95.01. As such, Applicant requests that the Examiner set forth a ground of rejection of claim 17 if the rejection thereof is maintained in a non-final Office Action so that Applicant can respond thereto.

As such, since there are no grounds of rejection of claim 17, Applicant believes that claim 17 and the claims that depend therefrom are patentably distinct from the art of record.

Claims 2-4, 12, 14 and 18-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu. Applicant respectfully disagrees with the Examiner with respect to the art as applied, but in light of claims 2-4, 12, 14 and 18-19 depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and, therefore, requests allowance of claims 2-4, 12, 14 and 18-19 at least pursuant to the chain of dependency.

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Moore. Applicant respectfully disagrees with the Examiner with respect to the art as applied, but in light of claim 5 depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and, therefore, requests allowance of claim 5 at least pursuant to the chain of dependency.

Claims 6-8, 13, 15, 21, and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Watanabe. Applicant respectfully disagrees with the Examiner with respect to the art as applied, but in light of claims 6-8, 13, 15,

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21, and 22 depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and, therefore, requests allowance of claims 6-8, 13, 15, 21, and 22 at least pursuant to the chain of dependency.

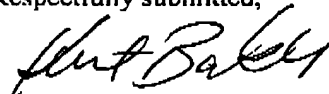
Claims 9, 10, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Calvin. Applicant respectfully disagrees with the Examiner with respect to the art as applied, but in light of claims 9, 10, and 20 depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and, therefore, requests allowance of claims 9, 10, and 20 at least pursuant to the chain of dependency.

Claim 16 was rejected under 35 U.S.C. §103(a) as being unpatentable over Murthy and Popescu, and further in view of Hampel et al. Applicant respectfully disagrees with the Examiner with respect to the art as applied, but in light of claim 16 depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and, therefore, requests allowance of claim 16 at least pursuant to the chain of dependency.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-22.

Applicant appreciates the Examiner's consideration of these remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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